

**To:** Charters, David[Charters.DavidW@epa.gov]; Sprenger, Mark[Sprenger.Mark@epa.gov]  
**From:** Greenberg, Marc  
**Sent:** Wed 8/12/2015 9:13:56 PM  
**Subject:** FW: MASS BALANCE QUESTION

**From:** Greenberg, Marc  
**Sent:** Wednesday, August 12, 2015 4:48 PM  
**To:** Rauscher, Jon; Black, Ned; OBrien, Wendy; Keteles, Kristen; Wall, Dan  
**Cc:** Johnson, Terrence; Allen, HarryL; Valdes, Dennisses; McKean, Deborah; Hiatt, Gerald; Powell, Greg  
**Subject:** FW: MASS BALANCE QUESTION

Ned & Jon,

I'm sure the response is very fluid in the field right now and there are many priorities being juggled. We very much want to give you the support you may need on the mass balance.

Unfortunately, no information has been provided to ERT's expert on this, Terrence Johnson. Again, with all of the priorities out there in the field, it's possible that there just hasn't been the time for folks to pursue this further and for additional dialogue across the 6,8,9 REOC-EUs. Terrence is ready to do the work upon coordination with the folks who have the info he needs. I suggest that the EULs discuss this soon and contact Terrence Johnson to scope the parameters he would need to run the calculations and then get the information to him through the Command so that this work can be done for you if, ultimately, you still need it.

Marc

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Marc S. Greenberg, Ph.D.  
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[greenberg.marc@epa.gov](mailto:greenberg.marc@epa.gov)

**From:** Black, Ned  
**Sent:** Wednesday, August 12, 2015 4:13 PM  
**To:** Greenberg, Marc  
**Subject:** RE: MASS BALANCE QUESTION

Hey Marc,

We need that mass balance yesterday, or sooner if possible.

Thnx,

ned

ned black, ph.d.

us epa r9

regional cercla ecologist

415-972-3055

Please be advised I currently have limited access to email when I am not in the office (e.g., on travel), therefore please be patient with any communication delays.

**From:** Greenberg, Marc  
**Sent:** Monday, August 10, 2015 3:14 PM  
**To:** Black, Ned; Rauscher, Jon; Wall, Dan; OBrien, Wendy; Keteles, Kristen; Hiatt, Gerald  
**Cc:** Allen, HarryL; Valdes, Dennisses; McKean, Deborah  
**Subject:** RE: MASS BALANCE QUESTION

Very good. The Region 6 EUL plans to reach out to Terrence Johnson for this support. Thanks.

**From:** Black, Ned  
**Sent:** Monday, August 10, 2015 3:18 PM  
**To:** Greenberg, Marc; Rauscher, Jon; Wall, Dan; OBrien, Wendy; Keteles, Kristen; Hiatt, Gerald  
**Cc:** Allen, HarryL; Valdes, Dennisses; McKean, Deborah  
**Subject:** RE: MASS BALANCE QUESTION

Marc,

After the regular EU call we had a follow-up with just Jon Rauscher, Phil Turner, Gerry Hiatt and me. We decided to cut a 213 asking ERT to do this mass balance.

Jon or Phil are taking care of that.

Cheers,

ned

ned black, ph.d.

us epa r9

regional cercla ecologist

415-972-3055

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**From:** Greenberg, Marc  
**Sent:** Monday, August 10, 2015 11:19 AM  
**To:** Rauscher, Jon; Wall, Dan; OBrien, Wendy; Keteles, Kristen; Black, Ned; Hiatt, Gerald  
**Cc:** Allen, HarryL; Valdes, Dennisses; McKean, Deborah  
**Subject:** MASS BALANCE QUESTION

Folks,

I put a different subject line on the question I sent earlier today to perhaps bring it to your attention in case you did not get to it before your EU call earlier today.

**From:** Greenberg, Marc  
**Sent:** Monday, August 10, 2015 11:23 AM  
**To:** Rauscher, Jon; Wall, Dan; OBrien, Wendy; Keteles, Kristen; Black, Ned; Hiatt, Gerald  
**Cc:** Allen, HarryL; Valdes, Dennisses; McKean, Deborah  
**Subject:** RE: EOC Spot Report: Update #1, Region 8, Abandoned Mine Release into Animas River; San Juan County, CO

EU folks,

Harry Allen in R9 brought a good question about mass balance to my attention earlier today. Metals is one thing, but also pH, alkalinity, hardness and other WQ parameters. So, it might be wise to do some mass balances to show the estimated contributions to the stream other than color that is shown by a photograph. So the question is, has anyone been looking into a mass balance to enhance our understanding and expectations on what this spill of 3 M gal might mean? It might provide a way for us to contextualize the spill (from multiple perspectives: mass loading, exposure potential, and risk). Sounded like an EU question to me.

You may have people (contractor or in-house) that can do this for you as part of the response. If not, please contact myself or Dee Valdes for assistance.

Thanks,

Marc

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